CLAIMS

1. A projection-type display device, comprising:

a light source;

a spatial light modulation element which modulates incident light according to an applied image signal and emits the modulated light;

an illumination optical system which condenses light from said light source and illuminates said spatial light modulation element;

a projection lens which projects light emitted from said spatial light modulation element;

shielding means, positioned along the path of light on the side of either said illumination optical system or said projection lens with respect to said spatial light modulation element, and which varies the amount of shielding of transmitted light; and

image signal correction means which divides the picture plane of said spatial light modulation element into a plurality of areas, and performs correction on said image signal applied to said spatial light modulation element in accordance with the current shielding amount of said shielding means for each of said plurality of areas.

2. The projection-type display device according to claim 1, wherein

said image signal correction means performs correction for each of said areas in accordance with the output level characteristic of light in each area with respect to the application level of said image signal and in accordance with the current shielding amount of said shielding means.

3. The projection-type display device according to claim 1, further comprising:

storage means to store a plurality of correction data sets in accordance with the shielding amount of said shielding means, wherein

said image signal correction means performs correction, referring to the correction data in accordance with the current shielding amount of said shielding means in said storage means.

4. The projection-type display device according to claim 2, further comprising:

storage means to store a plurality of correction data sets in accordance with the shielding amount of said shielding means, wherein

said image signal correction means performs correction, referring to the correction data in accordance with the current shielding amount of said shielding means in said storage means.

5. A projection-type display device, comprising:

a light source;

a spatial light modulation element which modulates incident light according to an applied image signal and emits the modulated light;

an illumination optical system which condenses light from said light source and illuminates said spatial light modulation element;

a projection lens which projects light emitted from said spatial light modulation element; and

image signal correction means which divides the picture plane of said spatial light modulation element into a plurality of areas, and performs correction on said image signal applied to said spatial light modulation element for each of said plurality of areas in accordance with the f number at the current zoom position of said projection lens.

6. The projection-type display device according to claim 5, wherein

said image signal correction means performs correction for each of said areas in accordance with the output level characteristic of light in each area with respect to the level of application of said image signal and in accordance with the f number at the current zoom position of said projection lens.

7. The projection-type display device according to claim 5, further comprising:

storage means to store a plurality of correction data sets in accordance with the f number of said projection lens, wherein

said image signal correction means performs correction, referring to correction data in accordance with the f number at the current zoom position of said projection lens in said storage means.

8. The projection-type display device according to claim 6, further comprising:

storage means to store a plurality of correction data sets in accordance with the f number of said projection lens, wherein

said image signal correction means performs correction, referring to correction data in accordance with the f number at the current zoom position of said projection lens in said storage means.

9. The projection-type display device according to claim 5, further comprising:

judgment means to judge the current zoom position of said projection lens, wherein

said image signal correction means performs correction in accordance with the f number at the current zoom position of said projection lens, based on the judgment result of said judgment means.

10. The projection-type display device according to claim 6, further comprising:

judgment means to judge the current zoom position of said projection lens, wherein

said image signal correction means performs correction in accordance with the f number at the current zoom position of said projection lens, based on the judgment result of said judgment means.

11. The projection-type display device according to claim 7, further comprising:

judgment means to judge the current zoom position of said projection lens, wherein

said image signal correction means performs correction in accordance with the f number at the current zoom position of

said projection lens, based on the judgment result of said judgment means.

12. A projection-type display device, comprising:

a light source,

a spatial light modulation element which modulates incident light according to an applied image signal and emits the modulated light, and

an illumination optical system which condenses light from said light source and illuminates said spatial light modulation element; wherein

a projection lens which projects light emitted from said spatial light modulation element is replaceable by a plurality of types of projection lenses with different f numbers; and further comprising:

image signal correction means which divides the picture plane of said spatial light modulation element into a plurality of areas, and performs correction on said image signal applied to said spatial light modulation element for each of said plurality of areas in accordance with the f number of the currently mounted projection lens.

13. The projection-type display device according to claim 12, wherein

said image signal correction means performs correction for each of said areas in accordance with the output level characteristic of light in the area with respect to the level of application of said image signal and in accordance with the f number of said currently mounted projection lens.

14. The projection-type display device according to claim 12, further comprising:

storage means which stores a plurality of correction data sets in accordance with the f numbers of said plurality of types of projection lenses, wherein

said image signal correction means performs correction, referring to correction data in accordance with the f number of the currently mounted projection lens in said storage means.

15. The projection-type display device according to claim 13, further comprising:

storage means which stores a plurality of correction data sets in accordance with the f numbers of said plurality of types of projection lenses, wherein

said image signal correction means performs correction, referring to correction data in accordance with the f number of the currently mounted projection lens in said storage means.

16. The projection-type display device according to claim 12, further comprising:

judgment means to judge the f number of the currently mounted projection lens, wherein

said image signal correction means performs correction in accordance with the f number of the currently mounted projection lens, based on the judgment result of said judgment means.

17. The projection-type display device according to claim 13, further comprising:

judgment means to judge the f number of the currently mounted projection lens, wherein

said image signal correction means performs correction in accordance with the f number of the currently mounted projection lens, based on the judgment result of said judgment means.

18. The projection-type display device according to claim 14, further comprising:

judgment means to judge the f number of the currently mounted projection lens, wherein

said image signal correction means performs correction in accordance with the f number of the currently mounted projection lens, based on the judgment result of said judgment means.

19. The projection-type display device according to claim 12, wherein

said image signal correction means performs correction, referring to the correction data in individual correction data storage means included in said currently mounted projection lens which stores correction data to perform individual correction corresponding to the projection lens.

20. The projection-type display device according to claim 13, wherein

said image signal correction means performs correction, referring to the correction data in individual correction data storage means included in said currently mounted projection lens which stores correction data to perform individual correction corresponding to the projection lens.

21. The projection-type display device according to claim 12, further comprising:

standard correction data storage means which stores standard correction data in accordance with the f number of a standard projection lens, wherein

said image signal correction means performs correction, referring to said standard correction data in said standard correction data storage means and referring to differential data

in individual correction data storage means which is included in said currently mounted projection lens and which stores the differential data with respect to said standard correction data to perform individual correction corresponding to the projection lens.

22. The projection-type display device according to claim 13, further comprising:

standard correction data storage means which stores standard correction data in accordance with the f number of a standard projection lens, wherein

said image signal correction means performs correction, referring to said standard correction data in said standard correction data storage means and referring to differential data in individual correction data storage means which is included in said currently mounted projection lens and which stores the differential data with respect to said standard correction data to perform individual correction corresponding to the projection lens.